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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,173	11/30/2001	Satoshi Seo	12732-082001	4535

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A29

Office Action Summary

Application No.

09/997,173

Applicant(s)

SEO, SATOSHI

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6,8,11-13,15,17,20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9,10,14,16,18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This Office action is in response to applicant's election **without** traverse (paper no. 7, dated April 25, 2003) of the cross-linked complex at the site of the ligand and identified in Chemical Formula 1 from "Appendix B". [The examiner respectfully notes applicants listed instant Figures 1A and 2A as examples of a complex where ligands are at the lattice points. The examiner notes the instant specification identifies Fig. 1A and 2A as having metals atoms at the lattice points.] Applicant further elects the specific ligand of claim 10. Claims 1, 3, 5, 7, 9, 10, 14, 16, 18, and 19 read upon the elected species. Claims 2, 4, 6, 8, 11-13, 15, 17, 20, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 7, 9, 10, 14, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clough et al. (US 5,100,587) in view of "New Microporous Materials – Preparation of uniform micropores using complexes and their applications" to Mori et al. (Chemical Society of Japan) (cited by applicant). Clough et al. teaches a luminescent device comprising a zeolite crystalline material wherein the intralattice spaces are filled with a luminophore (see abstract). The luminophore may comprise an

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organic material such as anthracene compounds (see col. 3, lines 15-18) per the instant "electroluminescent organic compound" in the "light emitting layer". Per instant claims 14, 16, 18, and 19 Clough et al. teaches applications of the light sources include luminous instrumentation (see col. 8, lines 51-54). Clough et al. fails to teach a lattice material in which the organic compound is absorbed comprising an metal complex with ligands. The secondary reference, Mori et al., teaches a microporous material which holds other molecules in the lattice structure that is superior to zeolite as a microporous material (see translation of article, page 1, second to last line). Mori et al. teaches lattice structures comprising the organic component at the lattice point per instant claims 1 and 5 (see figure 4(b) and page 6 last three lines). Metals including Mo (atomic number 42) and Ru (atomic number 44) are taught as metals in the complexes per instant claims 3, 7, 9, and 10 (see page 6, line 11 following "Conclusion"). Mori et al. teaches a carboxylic organic ligand for the complexes according to the ligand of claims 9 and 10 (see top right Table, page 211 of Japanese article). The complexes include binuclear metal structures per instant claims 5, 9, and 10 (see page 6, line 6 under "Conclusion" and figure on page 210 of Japanese article). It would have been obvious to one of ordinary skill in the art to have formed metal complex structures according to the teachings of Mori et al. and have used them in place of zeolite in the luminescent devices of Clough, because Mori et al. teaches the organometallic lattice structures are superior in performance to zeolite as a microporous structure.

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (703)305-0788. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached at (703)308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2351.


DAWN GARRETT
PATENT EXAMINER
TECHNOLOGY CENTER 1700

D.G.
July 11, 2003